AMENDMENTS TO THE CLAIMS:

Please amend claims 1, 29, 33 and 41, as shown below.

This listing of claims will replace all prior versions and listings of claims in the Application:

Claim 1 (currently amended): An interferometric system, comprising:

a reference object;

a test object;

at least a first and a second mutually orthogonally polarized beam of light, the first beam interacting with a series of optical components including a reference object and a test object along a first path and the second beam interacting with the series of optical components along a second path wherein the first path-is spatially displaced from the second path at each component of the series of optical components, wherein the reference object has a surface curvature that focuses the first and the second beams back along a same path travelled by the beams entering the test object;

a simultaneous phase shifting module that receives at least a portion of the first and second beams after the first and second beams have interacted with said reference object and said test object; and

at least two phase-shifted interferograms generated substantially simultaneously from the portion of the first and second beams received at the simultaneous phase shifting module.

Claim 2 (cancelled).

Claim 3 (previously presented): An interferometric system of claim 1, wherein said portion of said beams comprises mutually orthogonally polarized reference and test beams.

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Claim 4 (previously presented): An interferometric system of claim 3, wherein said reference beam emanates from one of said spatially separated sources and said test beam emanates from another of said spatially separated sources.

Claim 5 (original): An interferometric system of claim 3, wherein said reference and test beams received by said simultaneous phase shifting module substantially overlap each other.

Claim 6 (original): An interferometric system of claim 1, wherein the mutually orthogonally polarized beams are coherent.

Claim 7 (previously presented): An interferometric system of claim 1, further comprising two spatially separated sources.

Claim 8 (original): An interferometric system of claim 1, further comprising an alignment module.

Claim 9 (original): An interferometric system of claim 1, further comprising an imaging module.

Claim 10 (previously presented): An interferometric system of claim 7, wherein the at least two spatially separated light sources are comprised of a linearly polarized light source and a polarization beamsplitter configured to split linearly polarized light into said two mutually orthogonally polarized beams.

Claim 11 (previously presented): An interferometric system of claim 7, wherein said sources are virtual.

Claim 12 (previously presented): An interferometric system of claim 7, wherein said sources are real.

Claim 13 (cancelled).

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Claim 14 (previously presented): An interferometric system of claim 13, wherein the nonpolarizing beamsplitter is positioned substantially between the light sources and the reference object.

Claim 15 (previously presented): An interferometric system of claim 1, further comprising a quarter waveplate positioned between the light sources and the reference object.

Claim 16 (previously presented): An interferometric system of claim 15, wherein the quarter waveplate is positioned substantially between a nonpolarizing beamsplitter and a collimator.

Claim 17 (previously presented): An interferometric system of claim 1, wherein the interferometric system is of a Fizeau configuration.

Claim 18 (previously presented): An interferometric system of claim 8, wherein the alignment module is positioned to intercept the beams between the test object and the simultaneous phase-shifting module.

Claim 19 (previously presented): An interferometric system of claim 9, wherein the imaging module is positioned to intercept the beams between the test object and the simultaneous phase shifting module.

Claim 20 (previously presented): An interferometric system of claim 7, wherein the at least two spatially separated light sources are comprised of a polarization beamsplitter configured to interact with a beam from a source to provide said mutually orthogonally polarized beams.

Claim 21 (original): An interferometric system of claim 20, wherein said polarization beamsplitter comprises a prism.

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Claim 22 (previously presented): An interferometric system of claim 20, wherein said polarization beamsplitter comprises a calcite beam displacer.

Claim 23 (original): An interferometric system of claim 20, wherein said polarization beamsplitter comprises two calcite beam displacers and a half waveplate.

Claim 24 (previously presented): An interferometric system of claim 20, wherein the polarization beamsplitter comprises two fiber optics and a cube polarizing beamsplitter.

Claim 25 (previously presented): An interferometric system of claim 20, wherein the polarization beamsplitter comprises a polarizing lateral displacement beamsplitter.

Claim 26 (original): An interferometric system of claim 20, wherein the polarization beamsplitter comprises a cube polarizing beamsplitter and mirror.

Claim 27 (original): An interferometric system of claim 1, further comprising a filter to block said other portion of the beams from entering the simultaneous phase shifting module.

Claim 28 (original): An interferometric system of claim 27, wherein said filter is configured with an aperture to permit passage of said portion of the beams received by the simultaneous phase shifting module.

Claim 29 (currently amended): An interferometric system, comprising:

a reference object;

a test object;

a source of polarized light and a polarization beamsplitter;

at least a first and a second mutually orthogonally polarized beam of light, the first beam interacting with a series of optical components including a reference object and a test object along a first path and the second beam interacting with the series of optical components along a second path, and wherein the first path is spatially displaced from the second path at

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each component of the series of optical components, wherein the reference object has a surface curvature that focuses the first and the second beams back along a same path travelled by the beams entering the object;

mcans for overlapping a test beam and a reference beam;

a phase shifting module that receives at least a portion of the first and second beams after ~~said~~ the first and second beams have interacted with the reference object and the test object; and

at least two phase-shifted interferograms generated substantially simultaneously from the portion of the first and second test and reference beams received at the phase shifting module.

Claim 30 (previously presented): An interferometric system of claim 29, wherein said polarized light from said source is linearly polarized.

Claim 31 (original): An interferometric system of claim 29, further comprising means for viewing said test and reference beams.

Claim 32 (original): An interferometric system of claim 29, further comprising means for selecting said test and reference beams.

Claim 33 (currently amended): An interferometric system, comprising:

a reference object;

a test object;

a source of linearly polarized light, and a polarization beamsplitter;

at least a first and a second mutually orthogonally polarized wavefront, the first beam interacting with a series of optical components including a reference object and a test object along a first path and the second beam interacting with the series of optical components along a

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second path, and wherein the first path is spatially displaced from the second path at each component of the series of optical components, wherein the reference object has a surface curvature that focuses the first and the second beams back along a same path travelled by the beams entering the test object;

at least one orthogonally polarized reference wavefront and at least one orthogonally polarized test wavefront is reflected from said reference object and said test object, respectively;

means for overlapping one of said at least one orthogonally polarized reference wavefront with one of said at least one orthogonally polarized test wavefronts; and

a simultaneous phase shifting module that receives said overlapping at least one reference wavefront and said at least one test wavefront;

at least two phase-shifted interferograms generated substantially simultaneously at the simultaneous phase shifting module from the received overlapping at least one reference wavefront and the at least one test wavefront.

Claim 34 (cancelled)

Claim 35 (previously presented): An interferometric system of claim 1, further comprising a variable phase retarder inserted between said light sources and said reference object.

Claim 36 (withdrawn): An interferometric system, comprising: a source module having a source of polarized light and a polarization beamsplitter configured to act on said polarized light to generate mutually orthogonally polarized beams of light; an interferometry module receiving said orthogonally polarized beams from said source, having optical elements, a reference object and a test object, said interferometry module further comprising a

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mechanism for manipulating a test beam and a reference beam into an overlapping position; a phase shifting module receiving a portion of said beams from said interferometry module to generate at least two phase-shifted interferograms substantially simultaneously from said test and reference beams, and an alignment camera which provides a view of relative positioning of the wavelengths and degree of overlap between them.

Claim 37 (withdrawn): An interferometric system of claim 36, wherein said polarized light from said source module is linearly polarized.

Claim 38 (withdrawn): An interferometric system of claim 36, wherein the mechanism for manipulating comprises a tip-tilt mechanism.

Claim 39 (withdrawn): An interferometric system, comprising: a source module having a source of linearly polarized light, and a polarization beamsplitter configured to generate mutually orthogonally polarized wavefronts as emanating from two spatially separated sources; an interferometry module receiving said orthogonally polarized wavefronts, said interferometry module having a test object and a reference, a beam splitter and a collimator, wherein orthogonally polarized reference wavefronts and orthogonally polarized test wavefronts exit the interferometry module; a tip-tilt mechanism for overlapping one of said orthogonally polarized reference wavefront with one of said orthogonally polarized test wavefronts; a simultaneous phase shifting module receiving said overlapping one reference wavefront and said one test wavefront from said interferometry module for generating at least two phase-shifted interferograms substantially simultaneously, wherein said wavefronts follow a substantially common path through said interferometric system.

Claim 40 (previously presented): An interferometric system of claim 1, wherein said beams follow a substantially common path through said interferometric system.

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Claim 41 (currently amended): An interferometric system comprising:

a Fizeau interferometer comprising a source of a first and a second polarized beam each having polarization rotated with respect to each other and each emanating from spatially separate origins, the first bcam interacting with a series of optical components including a reference object and a test object along a first path and the second beam interacting with the series of optical components along a second path, wherein the first path is spatially displaced from the second path at each component of the series of optical components, and wherein the reference object has a surface curvature that focuses the first and the second beams back along a same path travelled by the beams entering the test object.

Claim 42 (previously presented): An interferometric system of claim 7, wherein at least one of said sources is virtual.

Claim 43 (previously presented): An interferometric system of claim 1, wherein the first path is substantially common to the second path in a location between the reference object and the test object.

Claim 44 (previously presented): An interferometric system of claim 1, further comprising at least one beam-reference object interaction location for each of the first beam and the second beam, wherein the beam-reference object interaction location for the first beam is substantially common with the beam-reference object interaction location for the second beam, and wherein the beam-reference object interaction location for the first beam is spatially displaced from the beam-reference object interaction location for the second beam at least a first beam.

Claim 45 (previously presented): An interferometric system of claim 1, wherein the first path is spatially displaced from the second path along an entire distance between a non-polarizing beamsplitter and the reference object.

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Claim 46 (previously presented): An interferometric system of claim 1, wherein the reference object is located substantially between the test object and a non-polarizing beamsplitter.

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